REMARKS

Claims 1-8, 10-11, and 13 are pending. Applicants have carefully considered the Final Action dated March 7, 2007 ("Final Action") in this Application. Applicants present the following remarks in a sincere attempt to place this Application in condition for allowance. Applicants respectfully request reconsideration and allowance in light of the above amendments and the following remarks.

Applicants thank the Examiner for the courtesy of a telephone interview of May 16, 2007. During the interview, the following remarks were discussed.

Claims 1-8, 10-11, and 13 stand rejected under 35 U.S.C. §102(e) as allegedly anticipated by U.S. Patent No. 6,757,804 by Jochemsen et al. ("Jochemsen"). Applicants respectfully traverse these rejections.

According to the MPEP §2131, in order to establish a *prima facie* case for a §102(e) rejection the Claim must be fully anticipated by the reference. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicants respectfully submit that the Examiner has failed to establish *prima facie* anticipation for each and every element of the pending Claims.

First, regarding Claim 8, the Examiner asserts that Jochemsen teaches, "determining if the computer system is idle if the computer system is not idle, sleeping for an interval." Final Action, Page 7 (*citing* Jochemsen, col. 1, lines 49-58). Nowhere does Jochemsen disclose "determining if the computer system is idle" or performing any actions based on that determination. The Examiner's citation does not even hint at "determining if the computer system is idle":

> When a delete operation is necessary, it is desirable permanently to delete the minimum number of files so that (a) at least the required amount of free space is

created; and (b) defragmentation and free-space defragmentation are optimized.
It is an aim of preferred embodiments of the present invention to provide a method, system and corresponding computer program product for reducing fragmentation of a digital storage device.

Jochemsen, col. 1, lines 49-58. Applicants respectfully submit that nowhere else does Jochemsen even hint at "determining if the computer system is idle." Accordingly, as Jochemsen does not show "determining if the computer system is idle" it is therefore not a single prior art reference showing each and every element of Claim 8. As such, Jochemsen cannot support *prima facie* anticipation, and the Examiner's rejection under Section 102 fails for this reason alone.

Jochemsen likewise fails to teach a number of other elements of Claim 8, as well. For example, nowhere does Jochemsen teach "determining if defragmentation is complete if defragmentation is complete, deleting the location of the fragmented file clusters in the storage medium" as the Examiner alleges. Final Action, Page 7 (*citing* Jochemsen, col. 1, lines 49-53). As shown above, the cited reference does not teach anything close to "determining if defragmentation is complete." *See supra*; Jochemsen, col. 1, lines 49-53. Applicants respectfully submit that nowhere else does Jochemsen teach "determining if defragmentation is complete."

Neither does Jochemsen teach, "if defragmentation is not complete, determining if defragmentation is stopped by activity" as the Examiner alleges. Final Action, Page 7 (*citing* Jochemsen, col. 3, lines 22-34). The cited passage states:

> When a deletion operation is initiated (step 200) the file manager 30 is interrogated (step 202) to determine whether multiple files are available for deletion. A file is available for deletion if it has been so annotated. A file is only available for deletion if in doing so it provides sufficient free-space for the required write operation. This may mean that several of a plurality of files need to be deleted. If only a single file is available for deletion, it is deleted (step 204) and the file manager 30 updated accordingly (step 210). If multiple files are available a file is selected to be deleted to reduce fragmentation (step 206). Options for selecting the file to be deleted in this embodiment of the present invention are set out below. Next the selected file is permanently deleted (step 208) and the file manager 30 is updated accordingly (step 210).

Jochemsen, col. 3, lines 22-36. As shown, nowhere in the cited passage does Jochemsen even hint at "stopping defragmentation" much less "determining whether defragmentation is stopped by activity," as recited in Claim 8. Applicants respectfully submit that nowhere else doe Jochemsen even hint at "determining whether defragmentation is stopped by activity." Accordingly, Jochemsen fails to show this element, as well.

Applicants respectfully submit that, similarly, Jochemsen also fails to show "sleeping for an interval" or "reporting an error" as a function of "determining if defragmentation is stopped by activity." These two elements are also missing from Jochemsen. For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102 rejection of Claim 8, as Jochemsen completely fails to teach several elements of Claim 8. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claim 8 and allow Claim 8 in full.

Next, Applicants respectfully submit that Jochemsen also fails to teach each and every element of the remaining pending Claims. For example, regarding Claim 10, Applicants respectfully submit that Jochemsen fails to teach at least the following elements recited in Claim 10, "determining if the computer system is idle", "determining if defragmentation is complete", determining if [defragmentation] is stopped by activity" and "sleeping for an interval" or "reporting an error" based on whether defragmentation is stopped by activity. As described above, these elements are wholly missing from Jochemsen.

Regarding Claim 10, the Examiner cites a different passage to support "determining if the computer system is idle," but that passage also teaches nothing remotely close to "determining if the computer system is idle." See Final Action, Page 8 (*citing* Jochemsen, col. 2, lines 1-10). Specifically, the cited passage states:

> According to the present invention in a second aspect, there is provided a
> system arranged for reducing fragmentation of a digital storage device, characterized

by the system comprising means for determining that a plurality of files is available for deletion; means for selection one of the files; and means for deleting the selected file and not deleting another of the files.

It has been realized that with digital storage devices annotating a plurality of files for deletion, there is an efficient opportunity to reduce fragmentation by selective file deletion.

Jochemsen, col. 2, lines 1-11. Clearly, the cited passage comes nowhere near teaching "determining whether the computer system is idle." For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102 rejection of Claim 10, as Jochemsen completely fails to teach several elements of Claim 10. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claim 10 and allow Claim 10 in full.

Next, regarding Claim 11, Applicants respectfully submit that Jochemsen fails to teach at least the following elements recited in Claim 11, "determining if the computer system is idle", "determining if defragmentation is complete", determining if [defragmentation] is stopped by activity" and "sleeping for an interval" or "reporting an error" based on whether defragmentation is stopped by activity. As described above, these elements are wholly missing from Jochemsen. For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102 rejection of Claim 11, as Jochemsen completely fails to teach several elements of Claim 11. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claim 11 and allow Claim 11 in full.

Next, regarding Claim 13, Applicants respectfully submit that Jochemsen fails to teach at least the following elements recited in Claim 13, "determining if the computer system is idle", "determining if defragmentation is complete", determining if [defragmentation] is stopped by activity" and "sleeping for an interval" or "reporting an error" based on whether defragmentation is stopped by activity. As described above, these elements are wholly missing from Jochemsen. For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102

rejection of Claim 13, as Jochemsen completely fails to teach several elements of Claim 13. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claim 13 and allow Claim 13 in full.

Next, regarding Claims 3 and 7, Applicants respectfully submit that Jochemsen also fails to teach modifying the attributes of defragmentation "wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access," as asserted by the Examiner. Final Action, Pages 4 and 6 (*citing* Jochemsen, col. 4, lines 22-226 [sic], and 42-47). Applicants respectfully submit that nowhere does Jochemsen, either in the cited passages or elsewhere, recite the above limitation.

For example, Jochemsen recites:

> The determination of which file to delete whichever selection option is chosen is carried out by interrogating the file manager 30. For every file in a set of deletable files the effect of deletion on file fragmentation and free-space fragmentation is calculated.
> . . .
> The effect on free-space fragmentation is calculated by calculating the changes the deletion (for each file) would have on the free-space fragments (step 402). New free-space fragments might appear (undesirable), but several free-space fragments can be connected by deletion creating new free-space fragments (desirable). In general, the number of free-space fragments will increase (i.e. a positive change).

Jochemsen, col. 4, lines 22-26, 42-47. Clearly, this passage does not teach "wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access," as recited in Claims 3 and 7. Applicants respectfully submit that nowhere else does Jochemsen teach this element.

For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102 rejection of Claims 3 and 7, as Jochemsen completely fails to teach several elements of Claims 3 and 7. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claims 3 and 7 and allow Claims 3 and 7 in full.

Next, regarding Claims 2 and 6, Applicants respectfully submit that neither does Jochemsen teach "wherein the agent further comprises at least having the ability to modify attributes of defragmentation," as asserted by the Examiner. Final Action, Pages 4 and 6 (*citing* Jochemsen, col. 3, lines 37-46). Applicants respectfully submit that nowhere does Jochemsen, either in the cited passages or elsewhere, recite the above limitation.

Instead, the cited passage teaches selecting one of a number of files for deletion, stating, "there can be several criteria to determine the text file to delete." Jochemsen, col. 3, lines 40-41. Applicants respectfully submit that this fails to teach "wherein the agent further comprises at least having the ability to modify attributes of defragmentation," as recited in Claims 2 and 7. Applicants respectfully submit that nowhere else does Jochemsen teach this element.

For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102 rejection of Claims 2 and 6, as Jochemsen completely fails to teach several elements of Claims 2 and 6. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claims 2 and 6 and allow Claims 2 and 6 in full.

Finally, regarding Claim 1, the Examiner cites Jochemsen as teaching, "an agent, wherein the agent is at least: configured to operate while the computer system is at least idle (column 2 lines 58-67, Jochemsen); configured to defragment the plurality of file fragments (column 2, lines 1-10, Jochemsen); and configured to delete the record of at least locations of the plurality of file fragments (column 2 lines 58-67 and column 3 lines 23-45)." Final Action, Page 3.

The Examiner cites column 2, lines 1-10, of Jochemsen as teaching defragmentation. However, the actual text, reproduced above, instead teaches "reducing fragmentation" not active defragmentation. Applicants respectfully submit that Jochemsen teaches deletion and writing in a manner to reduce fragmentation of a file *before* the file is written to a disk. Conventional defragmentation takes place *after* a series of files have been written to a disk. In Jochemsen, no individual clusters are moved or rearranged to form more contiguous units. Instead, Jochemsen is essentially a specialized delete function in which files to be deleted are analyzed along with the fragmented free space and the size of a write file in order to delete only those files necessary to place the write file on the disk in a manner that reduces the overall fragmentation of the disk. *See* Jochemsen, col. 2, lines 51-58. A user implementing the teachings of Jochemsen may still have to actively defragment their disk in order to optimize performance.

Moreover, Claim 1 includes an agent "at least: configured to operate while the computer system is at least idle." The Examiner cites column 2 lines 58-67 for support of anticipation of this element. As described above, there is no determination whatsoever in Jochemsen of whether the computer system is or is not idle. Accordingly, Applicants respectfully submit that nowhere does Jochemsen teach this element, either.

As described above, Jochemsen teaches marking a file for deletion, whether the file is marked immediately or subsequently. The Jochemsen deletion takes place during periods of computer activity in which the computer system is instructed to *actively* write a file or clear a space. Nowhere does Jochemsen teach determination that the computer system is idle, or any actions associated therewith, as described above.

For at least the above reasons, Applicants have shown that Jochemsen cannot support a Section 102 rejection of Claim 1, as Jochemsen completely fails to teach several elements of Claim

1. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claim 1 and allow Claim 1 in full.

Similarly, Claim 5 recites, "an idle monitor, wherein the idle monitor is at least configured to enable defragmentation while the computer system is at least idle." Applicants respectfully submit that Jochemsen therefore fails to teach each and every element of Claim 5, for the same reasons as described above regarding Claim 1. As such, neither can Jochemsen cannot support a Section 102 rejection of Claim 5, as Jochemsen completely fails to teach several elements of Claim 5. Accordingly, Applicants respectfully request the Examiner to withdraw the rejection of Claim 5 and allow Claim 5 in full.

Additionally, dependent Claims 2-4, 6, and 7, depend upon and further limit independent Claims 1 and 5. Hence, for at least the aforementioned reasons, these dependent Claims would be deemed to be in condition for allowance. Therefore the Applicant also respectfully requests the Examiner to withdraw the rejections of dependent Claims 2-4, 6, and 7, and allow Claims 2-4, 6, and 7 in full.

Applicants have now addressed all of the Claim objections and rejections cited in the Office Action. In view of the amendments to the Claims and Applicants' remarks, Applicants believe that pending Claims 1-8, 10-11, and 13 are in condition for allowance, and respectfully request allowance of Claims 1-8, 10-11, and 13.

Applicants believe no additional fees are due in this Response. In the event that any other fees are due, Applicants hereby authorize the Commissioner to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 09-0447 of IBM Corporation.

Applicants believe that the present Response contains a complete response to the issues raised in the Office Action. Applicants respectfully request full reconsideration. If the Examiner should have any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference. In particular, should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, Applicants invite the Examiner to telephone the undersigned at the number listed below.

Respectfully submitted,

CARR LLP

Dated: <u>June 7, 2007</u>   <u>/Gregory W. Carr/</u>
CARR LLP   Gregory W. Carr
670 Founders Square   Reg. No. 31,093
900 Jackson Street
Dallas, Texas 75202
Telephone: (214) 760-3030
Fax: (214) 760-3003